

Case 3574***Cereus Ilmoni, 1830 (Cnidaria, Anthozoa): proposed designation of a new type species***

Daphne Gail Fautin

*Department of Ecology and Evolutionary Biology and Biodiversity Institute,
University of Kansas, Lawrence, Kansas 66045, U.S.A.*

(e-mail: fautin@ku.edu)

R.B. Williams

Norfolk House, Western Road, Tring, Hertfordshire HP23 4BN, U.K.

(e-mail: ray.coxitec@tesco.net)

Tina Molodtsova

*P.P. Shirshov Institute of Oceanology RAS, 36 Nakhimovsky pr., Moscow,
117997 RUSSIA (e-mail: tina@ocean.ru)*

Abstract. The purpose of this application, under Articles 78.1 and 81.1 of the Code, is to designate *Actinia pedunculata* Pennant, 1777 as the type species of the genus *Cereus* Ilmoni, 1830. *Cereus pedunculatus* is a widely-studied member of the order Actiniaria (sea anemones sensu stricto). The type species of *Cereus* by monotypy is currently *Cereus cupreus*, a nomen dubium not used since 1857 except in synonymy lists, and a member of the order Ceriantharia (tube anemones). We also request that the name *Actinocereus* Blainville, 1830 be suppressed for the purposes of the Principle of Priority.

Keywords. Nomenclature; taxonomy; *Cereus*; Actiniaria; Ceriantharia; *Cereus*; *Actinia pedunculata*; sea anemones; tube anemones; northeast Atlantic and Mediterranean.

1. The generic name *Cereus* was first published for an animal by Oken (1815, p. 349); it contained a single species, *Actinia bellis* Ellis & Solander, 1786. The work of Oken was rejected for nomenclatural purposes in Opinion 417 (BZN 14: 1–42; September 1956) because the author did not apply the principles of binominal nomenclature.

2. Blainville (1830, p. 294) introduced the name *Actinocereus*, about which he wrote ‘Ce genre, établi par M. Oken sous le nom de *Cereus*. . .’ [‘This genus, established by Mr Oken under the name of *Cereus*. . .’]. Thus Blainville seems to have intended *Actinocereus* as a replacement name for *Cereus* Oken, 1815, although his motivation is unclear: at that time, the action by the International Commission on Zoological Nomenclature on the matter of Oken’s names was more than a century in the future. If *Actinocereus* Blainville, 1830 were regarded as a replacement name for *Cereus* Oken, its type species would be *Actinia bellis* Ellis & Solander, 1786, under Article 67.8 of the Code, which states ‘both the prior nominal taxon and its replacement have

the same type species'. However, while *Actinocereus* Blainville, 1830 is an available name, it cannot serve as a replacement for the unavailable (under Opinion 417) name *Cereus* Oken. Replacement names are those proposed for 'previously established names' (Article 67.8), and an 'established name' is defined in the Glossary as one made available by satisfying the requirements of the Code. *Actinia bellis* appeared in the list of species included in *Actinocereus* but only as a junior synonym of *Actinia pedunculata* Pennant, 1777 (p. 41) and no type species was ever designated from among the seven originally included nominal species (including synonyms). Since that first mention *Actinocereus* has been used only once, by Blainville (1834) in another catalogue; as in his earlier work, *Actinocereus pedunculatus* (Pennant, 1777) is listed among the members of the genus. *Actinocereus* was not mentioned in any later catalogues of anemones, such as those of Andres (1883) and Carlgren (1949), and no valid species are currently referred to this genus (Fautin, 2011).

3. Also in 1830, the name *Cereus* was again proposed, this time by Ilmoni (1830, p. 697) for *Cereus cupreus* Ilmoni, 1830 (p. 698), which is the type species by monotypy. The original description was repeated and published in virtually identical form the following year (Ilmoni, 1831). Because only *Cereus cupreus* was listed in the genus, this seems not to have been the same taxon that Oken (1815) meant by that generic name. No type specimen of the species is known to exist (Fautin, 2011).

4. From Ilmoni's description of *Cereus cupreus* it is clear that the species is a member of the order Ceriantharia, the common name of which is 'tube anemones'. However, beyond that, the identity of *Cereus cupreus* is uncertain. Following the questioned synonymy of Andres (1881), Pax & Mueller (1955) synonymised it with *Tubularia membranacea* Gmelin, 1796 (currently *Cerianthus membranaceus*). Andres (1881) also questionably synonymised *Cereus cupreus* with *Tubularia solitaria* Rapp, 1829 (currently *Cerianthus solitarius*).

5. According to Fautin (2011), the generic name *Cereus* has been used in combination with 42 species names, 41 of which refer to animals belonging to the order Actiniaria, commonly known as true 'sea anemones'. According to Fautin (2011), only four of those species are now placed in *Cereus*: *Actinia pedunculata* Pennant, 1777, *Actinia filiformis* Rapp, 1829, *Actinia amethystina* Quoy & Gaimard, 1833 and *Sagartia herpetodes* McMurrich, 1904. *Actinia amethystina* and *Actinia filiformis* were transferred to *Cereus* Ilmoni, 1830 by Milne Edwards (1857). Since then, the only mention of the former was in the comprehensive catalogue by Andres (1883), as being of uncertain generic affinity; and the only mention of the latter was also by Andres (1883), who declared it a nomen dubium. We therefore consider both to be nomina dubia. Carlgren (1959) moved *Sagartia herpetodes* to the genus *Cereus*; Häussermann & Försterra (2003) expressed doubt that *Cereus herpetodes* belongs to the same genus as *C. pedunculatus*.

6. Thus the only certain member of the genus *Cereus* Ilmoni, 1830 is the sea anemone *C. pedunculatus* (Pennant, 1777) (p. 41), which was transferred to the genus by Fischer (1874). Pennant's (1777) Vol. 4 was issued both in quarto and octavo formats, and these were paginated differently. We follow Sherborn (1902, p. xliii) in considering the larger format to be definitive.

7. Common along European shores and also reported from the Azores and Canary Islands, *Cereus pedunculatus* has been the subject of a very large amount of research. (a list of references downloaded from Fautin (2011), including ecological and

physiological works, is filed with the Secretariat). In catalogues of sea anemones of the world, both Stephenson (1920) and Carlgren (1949) listed *Cereus pedunculatus* as the only member of the genus (Stephenson also identified it explicitly as the 'genotype').

8. In his treatment of *Cereus* in *British Anthozoa: Keys and notes for the identification of the species*, Manuel (1981, p. 150) stated that R.B. Williams was preparing 'An application to validate the name' and also noted that *Cereus* 'was first proposed by Oken (1815) in a publication that has since been declared nomenclaturally invalid.' In fact, Williams did not submit this application, nor the manuscript, *A nomenclatural review of the British sea anemones*, incorrectly referred to by Manuel (1981) as 'Williams (in press)'. Moreover, we are confident that Manuel (1981), who listed the type species as '*Cereus pedunculatus*', was unaware of the publications by Ilmoni because he was using the unpublished notes of Williams, who did not know of them. Since the actual dates of Ilmoni's (1830) and Blainville's (1830) papers cannot at present be objectively determined, we propose that the name *Actinocereus* Blainville (1830) be suppressed by the Commission for the purposes of the Principle of Priority.

9. Because the type species of *Cereus* Ilmoni, 1830 is a ceriantharian, *Actinia pedunculata* Pennant, 1777, an actinarian, should be placed in a different genus. However, *Cereus* can be used unambiguously for *pedunculatus* because *C. cupreus*, its original type species, is a nomen dubium and this combination has not been used for more than 150 years. Changing such a well-known combination as *Cereus pedunculatus* now, after more than a century and a quarter of use, would be highly disruptive.

10. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power:
 - (a) to set aside all previous type fixations for *Cereus* Ilmoni, 1830 and designate *Actinia pedunculata* Pennant, 1777, as its type species;
 - (b) to suppress the generic name *Actinocereus* Blainville (1830) for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;
- (2) to place on the Official List of Generic Names in Zoology the name *Cereus* Ilmoni, 1830 (gender: masculine), type species *Actinia pedunculata* Pennant, 1777, as ruled in (1)(a) above;
- (3) to place on the Official List of Specific Names in Zoology the name *pedunculata* Pennant, 1777, as published in the binomen *Actinia pedunculata* (specific name of the type species of *Cereus* Ilmoni, 1830, as ruled in (1)(a) above);
- (4) to place on the Official Index of Rejected and Unavailable Generic Names in Zoology the name *Actinocereus* Blainville (1830), as suppressed in (1)(b) above.

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Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).